The Oldways Whole Grains Council’s 2021 Whole Grains Consumer Insights Survey was conducted to answer key questions about whole grain consumption, and consumer knowledge and habits around whole grains. The survey also examined consumer recognition and attitudes toward the Whole Grain Stamp. This was the third time the Oldways Whole Grains Council has surveyed American consumers to better understand the whole grain landscape in the US.

This year’s online survey of 1,505 Americans, ages 18 to 88, was nationally census-representative for age, gender, race/ethnicity, region, and income. Of all respondents, 75% reported that they are the primary food purchaser for their household and 25% make about half the food purchasing decisions for their household. The survey was conducted from May 10–12, 2021.

The most significant findings from this year’s survey are centered on:

- Whole grain consumption: how often consumers choose whole grains, why consumers choose whole grains (or not), familiarity with different whole grains, when and where are consumers are most likely to eat whole grains, and which types of food are most often consumed in whole grain form

- The impact of the pandemic on eating and cooking habits

- How sustainability and environmental considerations influence food choices/diet

- Awareness of sprouted grains and their associated benefits

- Knowledge of gluten and who must avoid it
• The importance of clear whole grain labeling and the impact of third-party certifications

• Trust, recognition, and understanding of the Whole Grain Stamp

Some of this year’s most compelling findings include:

**More than half of Americans say they choose whole grain options at least half the time.**

Since 2005, the Dietary Guidelines for Americans have encouraged all of us to make at least half our grains whole. According to our survey data, 59% of Americans are meeting this goal, with 26% of consumers telling us they nearly always choose whole grains whenever they are available. These figures are even higher among younger generations, with 64% of Gen Z and Millennial consumers making half their grains whole. Additionally, 67% of parents of young children (age 0–12), and 74% of health-conscious consumers choose whole grains at least half the time.

**Whole grain consumption continues to grow despite the media hype about low-carb and grain-free fad diets.**

Fad diets that involve low- or no-carb eating patterns may be grabbing headlines, but the reality is that 95% of consumers tell us their whole grain consumption has either increased or is holding steady compared with five years ago. Interestingly, while we often assume that low-carb dieters have lower whole grain consumption, those who say they avoid carbs are more likely to also tell us they look for whole grains when shopping. Those who say they avoid carbs are also more likely to say they nearly always choose whole grain options and more likely to tell us their whole grain intake has increased in the last five years. This may indicate that people are differentiating based on the nutritional quality of different carbohydrate sources and gravitating toward high-quality carbs, like whole grains.

**The number of consumers who say taste is a barrier to eating more whole grains is decreasing.**

While health remains the leading reason (82%) for choosing whole grains, it’s not the only one. Today, more people consider the flavor of whole grains to be a benefit (38%) than a barrier (33%), and the percentage of those who cite taste as a barrier has fallen significantly since our last survey. In 2021, 33% say taste is a barrier, compared with 42% in 2018. Of those who say they nearly always choose whole grains, 45% see taste as a benefit and only 18% see it as a barrier, suggesting that the more exposure you have to whole grains, the more you come to appreciate the nuttier, more robust flavors.

**Half of American consumers are eating more home-cooked meals as a result of the pandemic.**

Our survey data show that the vast majority of consumers (88%) are most likely to consume whole grains when eating at home. With half of American consumers reporting that they are eating more home-cooked meals as a result of the pandemic, it may be no surprise that 1 in 5 consumers tells us they are also eating more whole grains now than they did before the pandemic.
Increasingly, sustainability is a motivation for choosing whole grains.

Two-thirds of consumers consider whole grains to be sustainable and environmentally friendly.

In 2018, when we asked if sustainability was one of the reasons people choose whole grains, just 12% of consumers said yes. Today, 19% say sustainability is a factor in choosing whole grains, and among young consumers (Gen Z and Millennials) this is an even stronger motivator, with 26% citing sustainability in their decision making.

About a quarter of consumers know about sprouted grains and seek them out.

This figure is even higher among plant-based eaters (vegans, vegetarians, pescatarians, and those who follow a plant-based diet) (47%) and parents of young children (age 0–12) (42%). Shoppers choose sprouted grains for their flavor and taste (58%) as well as their digestibility (44%) and nutritional characteristics (such as the increased bioavailability of nutrients) (41%).

There continues to be a lot of confusion about gluten.

About half of American consumers have some idea what gluten is, but very few (7%) can fully define it correctly. Although one quarter of consumers told us they have cut back on gluten, 92% of people say they eat gluten some or all of the time, meaning that they are not following a true gluten-free diet. Only 1.84% of consumers told us they avoid gluten entirely due to a medical diagnosis, which lines up with the estimated prevalence of celiac disease in the general population.

Third-party packaging symbols like the Whole Grain Stamp boost consumer confidence and provide important information to consumers.

About two-thirds of consumers say seeing third-party labeling on foods gives them more confidence in the products they are buying. Our survey also found that a significant majority of consumers (70%) wish information about the whole grain content of products was included on product packaging. The Whole Grain Stamp provides this whole grain content information, making it easy to identify and compare whole grain products when shopping, while also providing the peace-of-mind that third-party labeling offers consumers.

More people than ever say they trust the Whole Grain Stamp.

Trust in the Whole Grain Stamp has increased steadily over the past six years, with 86% of all consumers today saying they trust the Whole Grain Stamp, 89% percent of younger consumers saying they trust it, and 91% of parents with young children telling us they trust it. Three out of four consumers say they would use the Whole Grain Stamp as part of their purchasing decision, and most consumers say they would be skeptical of any whole grain claims made on a product that did not use the Whole Grain Stamp.
Consumer Food Habits
Top influences on purchasing decisions include **flavor, familiarity, health, ease of preparation**, and a desire to try **new foods**.

### Consumer purchasing decisions

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The taste and flavor of the product is a major factor in my purchasing decision.</td>
<td>64%</td>
</tr>
<tr>
<td>I eat mostly foods that I’m familiar with.</td>
<td>54%</td>
</tr>
<tr>
<td>Buying healthy food is important to me.</td>
<td>50%</td>
</tr>
<tr>
<td>I seek out products that are quick and easy to prepare.</td>
<td>48%</td>
</tr>
<tr>
<td>I like to try new foods and ingredients.</td>
<td>48%</td>
</tr>
<tr>
<td>The price of the product is a major factor in my purchasing decision.</td>
<td>47%</td>
</tr>
<tr>
<td>I try to avoid added sugars.</td>
<td>39%</td>
</tr>
<tr>
<td>I look for products that contain whole grains.</td>
<td>31%</td>
</tr>
<tr>
<td>I like to buy prepared meals that I can heat up at home.</td>
<td>28%</td>
</tr>
<tr>
<td>I purchase food from local producers, farmers’ markets and/or farm shares.</td>
<td>26%</td>
</tr>
<tr>
<td>I look for products that contain a lot of fiber.</td>
<td>24%</td>
</tr>
<tr>
<td>I buy a lot of organic foods.</td>
<td>23%</td>
</tr>
<tr>
<td>I try to choose foods that are environmentally sustainable and good for the climate.</td>
<td>21%</td>
</tr>
<tr>
<td>I try to avoid carbohydrates.</td>
<td>18%</td>
</tr>
</tbody>
</table>

**Q2. Which of the following statements best describe your food purchasing decisions? Choose all that apply.**
Older consumers are more likely than younger consumers to avoid carbohydrates and added sugar and when shopping.

They’re also less likely to choose organic or environmentally sustainable foods, and to buy prepared foods.

Comparing purchasing decisions, younger versus older consumers

Q2. Which of the following statements best describe your food purchasing decisions? Choose all that apply.
Consumers who eat a **plant-based diet** (vegan, vegetarian, pescatarian, and plant-based) prioritize foods that are **healthy, whole grain, organic, or sustainable**. Price is less of a concern.

### Purchasing decisions of plant-based eaters

<table>
<thead>
<tr>
<th>Item</th>
<th>All consumers</th>
<th>Plant-based eaters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying healthy food is important to me.</td>
<td>50%</td>
<td>71%</td>
</tr>
<tr>
<td>I try to avoid added sugars.</td>
<td>39%</td>
<td>51%</td>
</tr>
<tr>
<td>I look for products that contain whole grains.</td>
<td>31%</td>
<td>41%</td>
</tr>
<tr>
<td>I buy a lot of organic foods.</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>I try to choose foods that are environmentally sustainable.</td>
<td>21%</td>
<td>38%</td>
</tr>
<tr>
<td>The price of the product is a major factor in my purchasing decision.</td>
<td>47%</td>
<td></td>
</tr>
</tbody>
</table>

**Q2.** Which of the following statements best describe your food purchasing decisions? Choose all that apply.
Consumers who are health-conscious also look for whole grain, organic, or sustainable foods. They buy from local producers more frequently.

Purchasing decisions of consumers who say that healthy food is important to them

- I look for products that contain whole grains: 31% (All consumers), 46% (Health-conscious consumers)
- I look for products that contain a lot of fiber: 24% (All consumers), 35% (Health-conscious consumers)
- I buy a lot of organic foods: 23% (All consumers), 35% (Health-conscious consumers)
- I try to choose foods that are environmentally sustainable: 21% (All consumers), 30% (Health-conscious consumers)
- I purchase food from local producers, farmers’ markets and/or farm shares: 26% (All consumers), 33% (Health-conscious consumers)

Q2. Which of the following statements best describe your food purchasing decisions? Choose all that apply.
The vast majority of consumers are omnivores.

Consumers who say (in Q2) that buying healthy food is important to them are slightly more likely to eat some variety of a plant-based diet [16% compared with 12% of total respondents].

**Consumer eating habits and preferences**

- **Omnivore** (I eat plants, meats, seafood, eggs and dairy) [89%]
- **Plant-Based** (I don’t necessarily eliminate animal products, but focus on eating mostly plants, such as fruits, vegetables, whole grains, legumes, etc.) [6%]
- **Pescatarian** (I don’t eat meat, but I do eat seafood, along with plants, eggs and dairy) [3%]
- **Vegetarian** (I don’t eat meat or seafood, but I eat plants, eggs and dairy) [2%]
- **Vegan** (I don’t eat any animal products, meaning no meat, seafood, eggs, or dairy) [1%]

*Q3. How would you best describe your eating habits & preferences? (Select one)*
When deciding what to eat, consumers most commonly consider how **healthy**, **tasty**, and **nutritious** a food is.

However, 47% of the people who placed Taste among their top five ranked it as their top deciding factor, whereas only 23% who selected Healthy said it was their top deciding factor.

**Percentage of consumers who marked each factor as one of the top five that they consider when deciding what to eat**

- Healthy: 84%
- Taste: 83%
- Nutrient-rich: 62%
- Whole-food ingredients: 61%
- High protein: 58%
- Low-calorie: 41%
- Family-friendly: 36%
- Organic: 30%
- Gluten-free: 16%
- Lack of allergens: 15%
- Plant-based: 14%

**Q31.** When you’re deciding what to eat, what factors do you consider from the list below. Please rank your top 5 factors.
Family, restaurant meals, and cooking shows or books are the most popular sources of meal and recipe inspiration for consumers.

59% of those who marked Family among their top three ranked it as their top source of inspiration.

Percentage of consumers who marked each inspiration source as one of their top three most influential

- **Family**: 78%
- **Restaurant meals**: 57%
- **Cooking shows, books, or magazines**: 50%
- **Friends**: 44%
- **Social media**: 30%
- **Professional chefs**: 26%
- **Other**: 10%

Responses included: “my own expertise and experience in the kitchen,” “my own imagination and original ideas,” “recipe websites/internet,” “recipe apps on my phone,” “experimentation in the kitchen,” “my mood/cravings,” and “the food in my refrigerator”

Q32. When it comes to meal/recipe inspiration, which of the following do you find to be the most influential? Please rank your top 3.
Among American consumers, the most popular cuisines are American, Italian, Tex-Mex/Mexican, Chinese, and BBQ/Soul Food.

Percentage of consumers who marked each cuisine as one of their top three favorites

- American: 59%
- Italian: 55%
- Tex-Mex / Mexican: 38%
- Chinese: 36%
- BBQ / Soul Food: 34%
- Japanese / Sushi: 13%
- Mediterranean: 12%
- Spanish: 11%
- French: 7%
- Latin American Foods: 7%
- Thai: 7%
- Caribbean cuisine: 6%
- Indian: 6%
- Korean: 4%
- African-inspired foods / Ethiopian: 2%
- Other: 2%
- Nordic: 1%
- Vietnamese: 1%

Q33. What are your top 3 favorite cuisines? Select your top 3.
Fewer **younger consumers** favor the top-ranked cuisines; they appear interested in a **broader range** of cuisines.

**Differences in cuisine preferences between older consumers (Gen X, Boomers, the Silent Generation) and younger consumers (Gen Z and Millennials)**

<table>
<thead>
<tr>
<th>Cuisine</th>
<th>Older Consumers</th>
<th>Younger Consumers</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>60%</td>
<td>56%</td>
<td>-4</td>
</tr>
<tr>
<td>Italian</td>
<td>59%</td>
<td>48%</td>
<td>-11</td>
</tr>
<tr>
<td>Tex-Mex/Mexican</td>
<td>40%</td>
<td>35%</td>
<td>-5</td>
</tr>
<tr>
<td>Chinese</td>
<td>37%</td>
<td>36%</td>
<td>-1</td>
</tr>
<tr>
<td>BBQ/Soul Food</td>
<td>32%</td>
<td>37%</td>
<td>+5</td>
</tr>
<tr>
<td>Japanese/Sushi</td>
<td>12%</td>
<td>14%</td>
<td>+2</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>13%</td>
<td>10%</td>
<td>-3</td>
</tr>
<tr>
<td>Spanish</td>
<td>8%</td>
<td>15%</td>
<td>+7</td>
</tr>
<tr>
<td>French</td>
<td>5%</td>
<td>10%</td>
<td>+5</td>
</tr>
<tr>
<td>Latin American Foods</td>
<td>6%</td>
<td>9%</td>
<td>+3</td>
</tr>
<tr>
<td>Thai</td>
<td>7%</td>
<td>6%</td>
<td>-1</td>
</tr>
<tr>
<td>Caribbean cuisine</td>
<td>5%</td>
<td>7%</td>
<td>+2</td>
</tr>
<tr>
<td>Indian</td>
<td>5%</td>
<td>8%</td>
<td>+3</td>
</tr>
<tr>
<td>Korean</td>
<td>3%</td>
<td>5%</td>
<td>+2</td>
</tr>
<tr>
<td>African-inspired/Ethiopian</td>
<td>1%</td>
<td>4%</td>
<td>+3</td>
</tr>
<tr>
<td>Nordic</td>
<td>0%</td>
<td>1%</td>
<td>+1</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>2%</td>
<td>1%</td>
<td>-1</td>
</tr>
</tbody>
</table>

Q33. What are your top 3 favorite cuisines? Select your top 3.
Most consumers—82%—say they read packaging labels like the Nutrition Facts Panel at least some of the time. Half of consumers read them quite often or all the time.

<table>
<thead>
<tr>
<th>Frequency with which consumers read packaging labels when buying food</th>
</tr>
</thead>
<tbody>
<tr>
<td>4%</td>
</tr>
<tr>
<td>Rarely</td>
</tr>
<tr>
<td>Never</td>
</tr>
</tbody>
</table>

Q34. When you are buying food and/or groceries, how often do you read the labels, i.e., the ingredients and/or the Nutrition Facts Panel? (Select one)
Half of American consumers are eating **more home-cooked meals** as a result of the pandemic.

Parents of young children (age 0–12) are much more likely to be using more meal kits since the start of the pandemic [12%] and more likely to be doing more baking at home [28%].

### Changes in eating/cooking habits since the start of COVID-19

- 52% I eat more home-cooked meals
- 28% My habits have not changed
- 22% I am doing more baking at home
- 20% I am eating more whole grains
- 18% I order more takeout
- 6% I am eating fewer whole grains
- 5% I use more meal kits/food subscription services

1% of respondents chose “Other”
Responses included: “more adventurous combinations,” “no change”

Q22. How have your eating/cooking habits changed since the start of the COVID-19 pandemic? Choose all that apply.
Whole Grain Consumption
Breads, breakfast cereals, and grain sides are the foods most commonly consumed as whole grains.

These numbers represent the average percentage consumed as whole grains across all those who said they eat each type of food.

Q4. How often do you choose whole grain versions of foods? For each of the following foods that you typically eat, please indicate what percent of the time the food is whole grain.
Most consumers wish they ate more whole grains, particularly breads, pasta, and grain sides.

Q5. For which of the following food categories do you wish your whole grain consumption was higher?

<table>
<thead>
<tr>
<th>Food Category</th>
<th>Percentage of Consumers Wanting to Increase Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tortillas and wraps</td>
<td>21%</td>
</tr>
<tr>
<td>Bread, rolls, buns</td>
<td>37%</td>
</tr>
<tr>
<td>Pasta</td>
<td>34%</td>
</tr>
<tr>
<td>Rice and other grain sides</td>
<td>29%</td>
</tr>
<tr>
<td>Crackers and snacks</td>
<td>27%</td>
</tr>
<tr>
<td>Breakfast cereals (hot or cold)</td>
<td>25%</td>
</tr>
<tr>
<td>Cookies, cakes, and baked treats</td>
<td>24%</td>
</tr>
<tr>
<td>I don’t wish to change my whole grain consumption levels for any of these foods</td>
<td>24%</td>
</tr>
<tr>
<td>Pancakes, waffles, French toast, and muffins</td>
<td>23%</td>
</tr>
<tr>
<td>Pizza crust</td>
<td>23%</td>
</tr>
<tr>
<td>Tortillas and wraps</td>
<td>21%</td>
</tr>
<tr>
<td>Biscuits</td>
<td>17%</td>
</tr>
<tr>
<td>I don’t eat any of these types of food</td>
<td>1%</td>
</tr>
</tbody>
</table>

75% of consumers want to increase the whole grains they eat in at least one of these categories.
A majority of all consumers—59%—say they choose whole grain options at least half the time.

In many demographic groups, that number is even higher:

- 64% of Gen Z and Millennial consumers
- 67% of parents of young children (age 0–12)
- 68% of consumers who correctly defined gluten (Q14)
- 74% of health-conscious consumers
- 77% of plant-based eaters (vegan, vegetarian, pescatarian, and plant-based)

**Overall consumer habits when choosing whole grains**

- 26% I nearly always choose whole grains whenever they are available.
- 33% I choose whole grains about half the time.
- 31% I occasionally choose whole grains.
- 7% I never or almost never choose whole grains.
- 4% I rarely consume any grain foods (whole or otherwise).

Q6. Which of the following statements best describes your habits in choosing grain foods? (Select one)
Additionally, **more than half** of consumers have **increased their whole grain consumption** in the past five years.

*Changes in whole grain consumption over the past five years*

- **23%** I have increased my consumption of whole grains a great deal.
- **34%** I have increased my consumption of whole grains somewhat.
- **38%** I eat about the same amount of whole grains.
- **2%** I have decreased my consumption of whole grains somewhat.
- **2%** I have decreased my consumption of whole grains a great deal.

Parents of young children are even more likely to have at least somewhat **increased** the amount of whole grains they eat.

- **57%** All consumers
- **67%** Parents of young children (age 0–12)

They’re also more likely to **look for whole grains** when shopping (Q2) [**36%** compared with 31% of total respondents].

*Q7. Compared to five years ago, how has your consumption of whole grains changed? (Select one)*
While we often assume that low-carb dieters have lower whole grain consumption, those who said they avoid carbs are more likely to:

**Look for high-fiber foods when shopping (Q2)**

- All consumers: 24%
- Low-carb consumers: 39%

**Nearly always choose to eat whole grains (Q6)**

- All consumers: 26%
- Low-carb consumers: 35%

**Look for whole grains when shopping (Q2)**

- All consumers: 31%
- Low-carb consumers: 42%

**Have increased their whole grain intake a great deal in the last five years (Q7)**

- All consumers: 23%
- Low-carb consumers: 34%

**Say that healthy food is important to them (Q2)**

- All consumers: 50%
- Low-carb consumers: 67%
Health is still the leading reason for choosing whole grains, but not the only one.

Reasons consumers choose whole grains

- **Health**: 82%
- **Taste**: 38%
- **Habit**: 22%
- **Sustainability**: 19%
- **Cost**: 11%

1% of respondents chose “Other”
Responses included: “just for a change of pace,” “much more filling,” “variety,” “dieting,” “doctor says I should eat more fiber”

- Consumers who say healthy food is important to them are more likely to choose whole grains because of their health benefits [90%].
- Those who went on to answer Q14 correctly (about gluten) were also more likely to say they choose whole grains for health reasons [90%].

Q8. Why do you choose whole grains? Choose all that apply.
**Sustainability** is increasingly a motivation for choosing whole grains.

*Sustainability as a motivation for choosing whole grains over time*

<table>
<thead>
<tr>
<th>2018</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Young consumers (Gen Z and Millennials) are more focused on sustainability, with 26% saying they choose whole grains for that reason in 2021.

<table>
<thead>
<tr>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>19%</td>
<td>19%</td>
<td>26%</td>
<td></td>
</tr>
</tbody>
</table>

40% of plant-based eaters (vegan, vegetarian, pescatarian, and plant-based) choose whole grains for environmental reasons.

**Young consumers, parents of young children, and plant-based eaters** are more often in the habit of choosing whole grains.

*Percentage of households by demographic group in the habit of purchasing whole grain foods*

- **Younger consumers (Gen Z and Millennials)**: 26%
- **Parents of young children (age 0–12)**: 29%
- **Plant-based eaters (vegan, vegetarian, pescatarian, and plant-based)**: 35%
- **All consumers**: 22%
- **Older consumers (Gen X, Boomers, the Silent Generation)**: 19%

Q8. Why do you choose whole grains? Choose all that apply.
The number of consumers who say **taste is a barrier** to eating more whole grains **is decreasing**.

Today, fewer consumers say that taste is a deterrent; more people consider the flavor of whole grains to be a benefit.

Of those who say they nearly always choose whole grains (Q6), **45%** see taste as a benefit and only **18%** see it as a barrier, suggesting that the more exposure you have to whole grains, the more you come to appreciate the nuttier, more robust flavors.

Q8. Why do you choose whole grains? Choose all that apply.  /  Q9. What, if anything, keeps you from eating more whole grains? Choose all that apply.
In addition to taste, **cost** remains a barrier, particularly for younger consumers.

However, about a quarter of consumers say that nothing is keeping them from eating more whole grains.

**Barriers to increasing whole grain consumption**

- **Taste**: 33%
- **Cost**: 29%
- **Nothing**: 27%
- **Availability**: 23%
- **Not in the habit of buying them**: 15%
- **Food allergies or medical condition**: 6%
- **Don't know how to prepare them**: 4%

2% of respondents chose “Other”

Responses included: “my family doesn’t like them,” “I just don’t eat a lot of grain foods,” and “cooking takes longer”

- Younger consumers (Gen Z and Millennials) are more likely to see cost as a barrier [35%] than older consumers (Gen X, Boomers, and the Silent Generation) [25%].

- The fact that many Americans are not very confident in their cooking skills does not seem to be a barrier to whole grain consumption, perhaps because whole grains are found in many forms that require no cooking.

Q9. What, if anything, keeps you from eating more whole grains? Choose all that apply.
Two thirds of consumers consider whole grains to be **sustainable** and **environmentally friendly**.

**Foods perceived by consumers as sustainable and environmentally friendly**

- **Fruits and vegetables**: 83%
- **Nuts, seeds, and legumes (beans & lentils)**: 72%
- **Whole grains**: 67%
- **Eggs and dairy**: 40%
- **Fish**: 36%
- **Poultry**: 25%
- **Red meats (beef, pork, lamb, etc.)**: 22%

Q11. When you think about foods that are sustainable and environmentally friendly, what types of foods do you picture? Choose all that apply.
Whole wheat, brown rice, and oats are the most well-known grains overall. Quinoa is the most well-known “ancient grain.”

Over 50% of consumers have heard of 9 of the 19 grains on the list. The 7% who answered Q14 correctly (about gluten) were also more familiar with various types of whole grains—more than 50% had heard of at least 13 of the 19.

Percentage of consumers selecting each grain they’ve heard of, eaten, and consider a favorite

Q17. Which of the following whole grains have you heard of? Select all that apply. / Q18. Which of the following whole grains have you eaten? Select all that apply. / Q19. Which of the following whole grains are your favorites? Select all that apply.
Less familiar grains like freekeh, fonio, farro, and amaranth become favorites once consumers have tried them.

Q18. Which of the following whole grains have you eaten? Select all that apply. / Q19. Which of the following whole grains are your favorites? Select all that apply.
Of those who eat whole grain foods, **one in three** says whole grain **bread** is their favorite food, with **oatmeal** as the runner-up.

While whole grain pasta is often described as a food that’s difficult to produce in whole grain form, one in ten consumers considers it their favorite whole grain food.

**Consumers’ one favorite whole grain food**

- Whole grain bread [38%]
- Oatmeal [25%]
- Popcorn [15%]
- Whole grain pasta [10%]
- Whole grain salads [2%]
- Whole grain cold cereal [9%]
- Other [1%]

Responses to “Other” included: “whole wheat wraps,” “brown rice,” “whole grain crisp bread,” “pancakes,” “whole grains and legumes in every combo possible,” “no one favorite,” “soba noodles,” and “wild rice”
Consumers are much more likely to eat whole grains **at home**.

Low availability of whole grain options at restaurants and cafeterias may contribute to the lower likelihood that people would eat whole grains in these settings.

**Locations where consumers say they are most likely to eat a whole grain food**

- At home [88%]
- At a restaurant [8%]
- At a work/school cafeteria or lunchroom [3%]
- Other [1%]

Responses included: “friend’s home,” “all of the above,” and “when that’s all that’s available”
Breakfast is the most popular time to eat whole grains, with nearly half of consumers getting most of their whole grains at this meal.

Meal during which consumers eat most of their whole grains

- Breakfast [47%]
- Lunch [24%]
- Dinner [23%]
- Snacks [6%]

Q21. When do you eat most of your whole grains? Select one.
Only about a quarter of consumers know about sprouted grains and seek them out.

**Percentage of consumers who eat/buy products made with sprouted grains**

- I don’t know what sprouted grains are [42%]
- No [29%]
- Yes [28%]

**Significantly more consumers in the following demographic groups reported seeking out sprouted grains:**

- All consumers: 28%
- Health-conscious consumers: 36%
- Younger consumers (Gen Z and Millennials): 37%
- Parents of young children (age 0–12): 42%
- Plant-based eaters (vegan, vegetarian, pescatarian, plant-based): 47%

Q12. Do you eat/buy products made with sprouted grains?
The top reason consumers choose sprouted grains is their **flavor and taste**. Of the consumers who eat sprouted grains, a majority—59%—choose them **at least half the time**.

### Reasons for choosing sprouted grains

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flavor and taste</td>
<td>58%</td>
</tr>
<tr>
<td>Digestibility</td>
<td>44%</td>
</tr>
<tr>
<td>Bioavailability of nutrients</td>
<td>41%</td>
</tr>
<tr>
<td>Reduced anti-nutrients/phytates</td>
<td>26%</td>
</tr>
</tbody>
</table>

3% of respondents chose “Other”
Responses included: “less likely to give me acid,” “biblical,” “healthy,” “try something new and different,” “texture,” and “keeps you feeling fuller”

### Frequency with which consumers of sprouted grains choose them

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I nearly always choose sprouted grains whenever they are available.</td>
<td>23%</td>
</tr>
<tr>
<td>I choose sprouted grains about half the time.</td>
<td>36%</td>
</tr>
<tr>
<td>I occasionally choose sprouted grains.</td>
<td>41%</td>
</tr>
</tbody>
</table>

About half of American consumers have some idea what gluten is—but few can fully define it correctly.

In the survey, there were two correct answers to the question “What is gluten?”

1. A protein found in wheat, barley, and rye
2. Helps bread dough stretch and rise

The seven percent who fully answered this question correctly are more likely to be women, much more likely to have a graduate degree, and more likely to have a household income over $100k.

- 60% are women
- 31% have a graduate degree [compared with 17% in the general pool of respondents]
- 35% have a household income over $100k [compared with 22% in the general pool of respondents]

Q14. What is gluten? Select all that apply.
Nearly a quarter of consumers responded that they don’t know what gluten is.

A similar percentage of consumers incorrectly identified gluten as something found in all grains.

**Consumers’ definitions of gluten**

- **42%** A protein found in wheat, barley, and rye
- **23%** It helps bread dough stretch and rise
- **22%** Don’t know
- **21%** Something found in all grains
- **12%** An unnatural substance found in GMO grains
- **9%** A substance that makes you gain weight
- **6%** A dangerous carbohydrate

1% of respondents chose “Other”

Responses included: “white flour,” “something trendy for people to obsess about,” “preservative,” and “something bad for celiac disease”

*Q14. What is gluten? Select all that apply.*
At least a quarter of consumers have cut back on gluten but are not following a true gluten-free diet.

People with a medically diagnosed gluten problem (such as celiac disease) must avoid even the smallest crumb of gluten-containing foods for a gluten-free diet to be effective.

Gluten avoidance among consumers

No, I do not avoid gluten [66%]

I’ve cut back on gluten as part of my diet, but do not avoid it altogether [26%]

Yes, I always avoid gluten [8%]

Even more consumers in the following demographic groups have reduced their consumption of gluten-containing foods:

- All consumers: 26%
- Younger consumers (Gen Z and Millennials): 32%
- Plant-based eaters (vegan, vegetarian, pescatarian, plant-based): 37%
- Health-conscious consumers: 41%
- Consumers who avoid carbs: 51%

Q15. Do you actively avoid gluten?
3 out of 4 consumers who always avoid gluten are doing so without a medical diagnosis.

Consumers who can correctly define gluten (in Q14) are more likely to say they do not avoid it [74% compared to 66% of total respondents].

Among the eight percent who always avoid gluten, only about a quarter have been medically diagnosed with a gluten problem.

- The medically diagnosed respondents make up 1.84% of all respondents, which lines up with the estimated prevalence of celiac disease in the general population.
- Only four percent of those who correctly defined gluten (in Q14) also say that they always avoid gluten. 75% of those respondents have a medically diagnosed gluten problem.

Q15. Do you actively avoid gluten? / Q16. Do you have a medically-diagnosed problem with gluten such as celiac disease?
Whole Grain Labeling
A **significant majority** of consumers want the whole grain content of products to be **included on the packaging** (something the Whole Grain Stamp offers consumers).

**Consumer interest in seeing whole grain content displayed on packaging**

Health-conscious consumers and consumers who frequently read the Nutrition Facts Panel are even more likely to want the whole grain contents of foods to be included.

Q23. The whole grain content of packaged food is not currently included on the product’s Nutrition Facts Panel. Is the whole grain content of a food something you wish was displayed on the product packaging?
Over **one third** of all consumers recognize the Whole Grain Stamp; nearly **two thirds** of **younger consumers** recognize it.

**Percentage of consumers who have seen the Whole Grain Stamp on packaging**

- Yes [44%]
- Not sure [22%]
- No [33%]

While older consumers don’t recognize the Stamp as often, other demographic groups are much more likely to have seen it:

- All consumers: 44%
- Frequent readers of Nutrition Facts Panels: 50%
- Parents of young children (age 0–12): 63%
- Younger consumers (Gen Z and Millennials): 64%

**Q24. Have you seen the Whole Grain Stamp on packages?**
More people than ever say they trust the Whole Grain Stamp.

The Whole Grain Stamp is an easy, trusted way for companies to provide the whole grain content information we know consumers are looking for (see Q23).

**Percentage of consumers who trust the Whole Grain Stamp to accurately state whole grain content**

Over the past six years, trust in the Stamp has steadily increased.
- 2015: 82%
- 2018: 83%
- 2021: 86%

- Gen Z and Millennials are more likely [89%] to trust the Whole Grain Stamp than Gen X, Boomers, and the Silent Generation [84%].
- 91% of parents with young children (age 0–12) say they trust the Stamp!

Q25. The Whole Grain Stamp is provided by an independent, third-party organization, certifying how much whole grain is in a product. Do you trust the Whole Grain Stamp to accurately state a product’s whole grain content?
Three out of four consumers would use the Whole Grain Stamp as part of their purchasing decisions.

Half of those consumers would also look at other factors like sugar and sodium content.

**Consumer likeliness to purchase a product with the Whole Grain Stamp**

Yes, seeing the Whole Grain Stamp would make me more likely to buy a product [39%]

Yes, but I would also consider other factors (sugar, sodium, etc.) [39%]

No, seeing the Whole Grain Stamp would not sway my purchasing decision [22%]

- Among parents with young children (age 0–12), 85% would use the Stamp; one third of those would also consider other factors.
- Similarly, 87% of health-conscious consumers say that seeing the Stamp would increase the likelihood that they would buy a product.
- 89% of consumers who regularly read the Nutrition Facts Panel say the Stamp would make them more likely to choose the product.

Q26. When comparing similar foods, does seeing the Whole Grain Stamp make you more likely to buy a product?
If a product does not use the Whole Grain Stamp, **more than half** of consumers would be **skeptical** of any whole grain claims made on its labeling.

**Percentage of consumers who would question whole grain claims on products without the Stamp**

- Yes [51%]
- No [49%]

- 58% of Gen Z and Millennial consumers
- 59% of parents of young children (0-12)
- 59% of health-conscious consumers
- 61% of frequent readers of Nutrition Facts Panels

Q27. This is the same product, but without the Whole Grain Stamp. If you do not see the Whole Grain Stamp on a package, do you question the product’s claims about whole grains?
Over half of consumers are able to **correctly identify** the meaning of the three Whole Grain Stamps.

**Consumer ability to correctly match each Stamp with the best explanation**

1. All of the grain (100%) in this product is whole grain.
2. This product provides 100% of your recommended daily amount of whole grain.
3. This product contains a significant amount of whole grain (specified on the Stamp) but contains primarily refined grain.
4. All of the grain (100%) in this product is refined (non-whole) grain.
5. Half or more of the grain in this product is whole grain.

**Q28.** There are currently three versions of the Whole Grain Stamp: the 100% Stamp, the 50%+ Stamp, and the Basic Stamp. Please match each Stamp with ONE set of words that best explains it.
About **two thirds** of consumers say packaging symbols like the Whole Grain Stamp give them **more confidence** in the product they are buying.

**Consumer confidence in products with independent, third-party food packaging symbols**  
** Ranked on a scale of 1 (Much less confidence) to 5 (Much more confidence)**

![Bar chart showing consumer confidence levels](chart.png)

**Q30.** When you see packaging symbols (like the Whole Grain Stamp) that are provided by independent, third-party organizations on food packages, does it give you more or less confidence in the product you’re buying? Please pick a point on the scale where 1 means Much less confidence, and a 5 means Much more confidence.
Demographics
<table>
<thead>
<tr>
<th>Region</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest</td>
<td>21%</td>
</tr>
<tr>
<td>Midwest</td>
<td>21%</td>
</tr>
<tr>
<td>South</td>
<td>37%</td>
</tr>
<tr>
<td>West</td>
<td>21%</td>
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<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
</tr>
<tr>
<td>Non-binary</td>
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<table>
<thead>
<tr>
<th>Age/Generation</th>
<th></th>
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<tbody>
<tr>
<td>Gen Z (18–22)</td>
<td>8%</td>
</tr>
<tr>
<td>Millennials (28–38)</td>
<td>29%</td>
</tr>
<tr>
<td>Gen X (39–54)</td>
<td>29%</td>
</tr>
<tr>
<td>Boomers (55–73)</td>
<td>30%</td>
</tr>
<tr>
<td>Silent Generation (74+)</td>
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<table>
<thead>
<tr>
<th>Race</th>
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<tbody>
<tr>
<td>Caucasian</td>
<td>70%</td>
</tr>
<tr>
<td>Black</td>
<td>13%</td>
</tr>
<tr>
<td>Hispanic or Latinx</td>
<td>14%</td>
</tr>
<tr>
<td>Asian</td>
<td>6%</td>
</tr>
<tr>
<td>American Indian</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>0%</td>
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</table>

<table>
<thead>
<tr>
<th>Income</th>
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<tbody>
<tr>
<td>Under $25,000</td>
<td>21%</td>
</tr>
<tr>
<td>$25,000–$49,999</td>
<td>25%</td>
</tr>
<tr>
<td>$50,000–$74,999</td>
<td>20%</td>
</tr>
<tr>
<td>$75,000–$99,999</td>
<td>12%</td>
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<tr>
<td>$100,000–$124,999</td>
<td>7%</td>
</tr>
<tr>
<td>$125,000–$149,999</td>
<td>6%</td>
</tr>
<tr>
<td>$150,000–$249,999</td>
<td>7%</td>
</tr>
<tr>
<td>$250,000 or more</td>
<td>2%</td>
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</table>

<table>
<thead>
<tr>
<th>Children in Household</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>31%</td>
</tr>
<tr>
<td>No</td>
<td>69%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children’s Ages (of those who said yes to having children in household)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under age 5</td>
<td>37%</td>
</tr>
<tr>
<td>6–12 years</td>
<td>54%</td>
</tr>
<tr>
<td>13–17 years</td>
<td>44%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Some high school or less</td>
<td>2%</td>
</tr>
<tr>
<td>Completed high school</td>
<td>18%</td>
</tr>
<tr>
<td>Trade/technical school</td>
<td>5%</td>
</tr>
<tr>
<td>Some college</td>
<td>25%</td>
</tr>
<tr>
<td>Completed college</td>
<td>33%</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>17%</td>
</tr>
</tbody>
</table>
For questions or more information about the survey, contact:

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caroline@OldwaysPT.org